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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,239	06/27/2003	John B. Rowen		7741
7590	03/10/2005		EXAMINER	
Mr. John B. Herring Avtec Industries 9 Kane Industrial Drive Hudson, MA 01749-2905			MATZEK, MATTHEW D	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/609,239	ROWEN, JOHN B.
	Examiner	Art Unit
	Matthew D. Matzek	1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 June 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Specification

1. The use of Trademarks/Tradenames is allowable in the Specification of a patent application, however they should be capitalized wherever they appear and be accompanied by the generic terminology. The proprietary nature of the Trademarks/Tradenames should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as a trademark or trademark. Please amend page 23 of the instant Specification.
2. The abstract of the disclosure is objected to because it fails to include percentage signs (%) following what is assumed by the Examiner to be the weight percentages of "a cementitious inorganic binder" and "a ceramic" on page 23. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 1 is rejected as it fails to include percentage signs (%) following what is assumed by the Examiner to be the weight percentages of "a cementitious inorganic binder" and "a ceramic". All remaining claims are rejected as dependent upon independent claim 1.
5. Claim 15 is rejected as the use of Trademarks/Tradenames KEVLAR® and NOMEX® renders the instant claim indefinite as the chemical composition and physical nature of the named

products may be altered in the future thereby changing the limitations set forth in the instant claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 7, 8, 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pirig et al (US Patent 6,054,513) in view of Gabbay (US Patent 5,102,726).

7. Pirig et al. disclose a fireproof coating, which forms an insulating layer and is based on carbon-forming substances forming a foam layer in the case of fire (Abstract). The disclosed coating comprises film-forming binders, blowing agents, and conventional assistants and additives, wherein said coating contains as blowing agents, a melamine salt and/or guanidine salts and/or microencapsulated melamine (Abstract). The fireproof coating preferably contains from 5 to 30 parts by weight of a film-forming binder, from 15 to 50 parts by weight of a substance forming a foam layer, from 5 to 25 parts by weight of a carbon-forming substance, from 5 to 50 parts by weight of the melamine salt and/or of the guanidine salt (phosphate-based catalyst) and from 5 to 50 parts by weight of conventional assistants and additives (Example 7 and col. 2, lines 19-28).

8. The film-forming binder preferably contains homopolymers based on vinyl acetate, copolymers based on vinyl acetate, ethylene and vinyl chloride, copolymers based on vinyl

acetate and the vinyl ester of a long-chain, branched carboxylic acid, copolymers based on vinyl acetate and di-n-butyl maleate, copolymers based on vinyl acetate and acrylic esters, copolymers based on styrene and acrylic esters and/or copolymers based on acrylic esters, vinyltoluene/acrylate copolymers, styrene/acrylate polymers (col. 2, lines 43-54). Example 1 uses melamine as a blowing agent. Preferable carbonifics used in the applied invention include pentaerythritol, dipentaerythritol, tripentaerythritol and/or polycondensates of pentaerythritol (col. 2, lines 60-63). The fireproof coating preferably contains precipitated silicas and silicates (col. 2, lines 66-67). The use of ceramic fibers is disclosed and Example 7 teaches the use of a conventional additive, such as ceramic fibers, at five weight percent (col. 1, lines 25-27). The invention of Pirig et al. is disclosed as a coating but is silent as to the specific articles to be coated.

9. Gabbay discloses a flexible laminate comprising a textile web substrate with a discrete adhesive layer between itself and a layer of at least one fire-resistant inorganic substance (Abstract). The adhesive layer may be cyanoacrylic, acrylic, or silicone types (col. 4, lines 33-35). The textile web fabric substrate may be composed of one or a combination of woven or non-woven polyesters, polyethylenes, cottons, nylons, aramids, core-yarns and fiberglass (col. 3, lines 42-45). The fire-resistance imparting inorganic substance may comprise calcium aluminate cement (col. 3, lines 49-53). The Gabbay patent is silent as to the basis weights of the textile web substrate, adhesive binder, and additive powders. It would have been obvious to one having ordinary skill in the art at the invention was made to have made the invention of Gabbay with the instantly claimed basis weights, since it has been held that where the general conditions of a

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claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

10. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the coating of Pirig et al. in the invention of Gabbay. The skilled artisan would have been motivated by desire to successfully create a fire-resistant article.

11. Claims 18-20 are rejected as the presence of process limitations on product claims, in which the product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product. *In re Stephens*, 145 USPQ 656.

12. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to Applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292.

13. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, Jr. (US Patent 5,225,464) in view of Pirig et al. in further view of Gabbay. The inventions of Pirig et al. and Gabbay have previously been disclosed.

14. Hill, Jr. discloses an intumescence coating in which the fire retardant coating produces a hard, vitreous, insulating char when exposed to heat and flame (col. 1, lines 6-9). The applied invention of Hill, Jr. comprises the reaction product of phosphoric acid, melamine and monoammonium phosphate, with chlorinated paraffin, pentaerythritol and an adhesive (col. 2, lines 1-5). Monoammonium phosphate is the preferred phosphate-based catalyst (col. 3, lines 31-33). Melamine is the preferred blowing agent (col. 3, lines 43-46). Chlorinated paraffin

containing at least 70% chlorine is the preferred halogen flame reducer (col. 3, lines 49-56). Pentaerythritol is the preferred carbon source and may be a monomer, dimer, trimer, or polymer (col. 3, lines 57-65). The adhesive or resin serves to bind the particulate components together and may be poly(vinyl acetate), poly(vinyl ester), polyester or epoxy resin (col. 3, line 66-col. 4, line 4). High melt temperature fibers such as ceramic fibers may be included into the coating composition to serve as a matrix reinforcer, heat sink, and fuel load diluter (col. 4, line 66- col. 5, line 2).

15. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the coating of Hill, Jr. with the weight percentages of Pirig et al. in the invention of Gabbay. The skilled artisan would have been motivated by desire to successfully create a fire-resistant article.

16. Claims 18-20 are rejected as the presence of process limitations on product claims, in which the product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product. *In re Stephens*, 145 USPQ 656.

17. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to Applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292.

18. Claims 1-5, 8-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (US PG Pub 2004/0110870) in view of Gabbay. The invention of Gabbay has previously been disclosed.

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19. Liu discloses a fire protection coating composition and method of using same on substrate materials for which some degree of fire protection from heat and fire (Abstract). The composition of the applied invention comprises a carbonific (starch, a sugar, a monopentaerythritol, a di pentaerythritol, or a tri pentaerythritol), a ceramic component (silica fiber, powder or a fumed silica), a phosphate-based catalyst (urea phosphate, melamine phosphate, di ammonium polyphosphate, a monobasic ammonium phosphate, di-basic ammonium phosphate, hemi-basic ammonium phosphate, or a urea ammonium phosphate), a blowing agent (urea, p-toluene sulfonyl hydrazide, dicyandiamide, azodicarbonamide, di aminophenazine, cyanurotriamide, cyanoguanidine, borax, zinc carbonate, and chlorinated paraffin), and binder (acrylics, vinyl acrylics, vinyl chloride-ethylene copolymers, chlorosulfonated polyethylene, polyvinylidene chloride, vinyl toluene-acrylic or acrylate copolymers, ethylene vinyl chloride, vinyl acetate-vinyl chloride-ethylene terpolymers, vinyl acetate-vinyl chloride copolymers, modified alkyds, urethane-acrylic copolymers, or cellulose ethers, that may be in the form of emulsion, dispersion, solution or hybrid) (claim 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have discovered the optimum or workable ranges of concentration limitations, including those instantly claimed, in Liu by routine experimentation in the absence of a showing of criticality. Akzo v. E.I. du Pont Nemours 1USPQ 2d 1704 (Fed.Cir 1987). The diameter of the silica powder particles has not been disclosed. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used silica particles with a diameter within a range of 10 to 500 microns. The skilled artisan would have been motivated by the desire to have the silica effectively perform as a dispersant.

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20. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the coating of Liu in the invention of Gabbay. The skilled artisan would have been motivated by desire to successfully create a fire-resistant article.

21. Claims 18-20 are rejected as the presence of process limitations on product claims, in which the product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product. *In re Stephens*, 145 USPQ 656.

22. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to Applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292.

23. Claims 1-6, 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholz et al. (US Patent 5,749,948) in view of Gabbay. The invention of Gabbay has previously been disclosed.

24. Scholz et al. discloses an expandable, flame-retardant coating materials comprising 4-25 weight percent film-forming binder, 10-40 weight percent ammonium polyphosphate (phosphate-based catalyst), 8-40 weight percent carbonific, 6-25 weight percent blowing agent, 0-25 weight percent filler (Abstract). The disclosed examples teach the use of pentaerythritol as a carbonific, melamine as a blowing agent, chlorinated paraffin as a secondary carbonific, and claim 1 teaches the use of vinyl acetate-vinyl ester copolymer, an anionic, aliphatic polyester-polyurethane, a styrene-acrylate copolymer, a homopolymer based on vinyl acetate, and mixtures thereof as binder.

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25. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the coating of Scholz et al. in the invention of Gabbay. The skilled artisan would have been motivated by desire to successfully create a fire-resistant article.

26. Claims 18-20 are rejected as the presence of process limitations on product claims, in which the product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product. *In re Stephens*, 145 USPQ 656.

27. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to Applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

28. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hallissy et al. (US PG Pub 2004/0054035).

29. The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing

under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

30. Hallissy et al. disclose an aqueous coating composition containing a film-forming polymer, at least one retardant or smoke suppressant, glass or ceramic microballoons, and expandable flake graphite may be applied (Abstract). The aqueous dispersion of film-forming polymer comprises a dispersion of a thermoplastic or thermoset polymers including polyesters, polyamides, and acrylics (para 15 and 16). The preferred carbonifics include dipentaerythritol or tripentaerythritol (para 21). The preferred blowing agent comprises of melamine (para 22). A halogen-containing material is preferably a component of the fire retardant and is preferably a chlorinated paraffin, and most preferably, a mixture of a chlorinated paraffin containing about 70% by weight of chlorine and chlorinated paraffin containing about 40% by weight of chlorine. The weight ratio of 70% chlorinated paraffin to 40% chlorinated paraffin is preferably from about 1:2. (para 23). The flame retardant preferably contains phosphorus-containing materials such as ammonium polyphosphate (para 25). The heat resistant inorganic material can include a mixture of silica flour and calcium aluminate cement (para 26). The weight percentages of Table 1 of the applied application read on those that are instantly claimed. The coating of the applied application may be used to coat fiberglass, ceramic, or other inorganic mesh materials (para 47). The Hallissy et al. publication is silent as to the basis weights of the textile web substrate, adhesive binder, and additive powders. It would have been obvious to one having ordinary skill in the art at the invention was made to have made the invention of Hallissy et al. with the instantly claimed basis weights motivated by desire to successfully create a fire-resistant textile.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdm



ELIZABETH COLE
PRIMARY EXAMINER